

REMARKS

Claims 1 - 3, 6 - 9, 14 - 17, and 22 - 30 are pending. Claims 1, 6, and 14 have been amended. Claims 4 - 5, 11, 13, 19, and 21 have been cancelled. Claims 22 - 30 have been added. No new matter has been introduced. Reexamination and reconsideration of the application are respectfully requested.

In the March 26, 2004 Office Action, the Examiner rejected claims 1-3, 6 - 12, 14 - 17, and 19 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,630,074 to Beltran (the Beltran reference). The Examiner rejected claims 4 - 5 under 35 U.S.C. § 103(a) as being unpatentable over the Beltran reference in view of U.S. Patent No. 5,862,403 to Kanai et al. (the Kanai reference). The Examiner rejected claims 13, 18, and 21 under 35 U.S.C. § 103(a) as being unpatentable over the Beltran reference in view of U.S. Patent No. 5,640,604 to Hirano et al. (the Hirano reference). These rejections are respectfully traversed in so far as they are applicable to the pending claims.

The present invention is directed to a system and method for inter-thread communication. A first group of threads has at least one thread. The at least one thread makes a request which is buffered in a first buffer. The request is retrieved from the first buffer. At least one thread in a second group of threads performs the operation according to the request retrieved from the first buffer. A second buffer buffers a response corresponding to the request where the response is generated by the at least one thread of the second group. The response is retrieved by the at least one thread from the first group.

Claim 1, as amended, recites:

A system for inter-thread communications, comprising:
 at least one thread from a first group of threads;
 a first buffer for buffering a request from the at least one thread from the first group;
 at least one thread from a second group of threads for performing an operation according to the request retrieved from the first buffer, **the at least one thread from the first group of threads not being informed as to which of the second group of threads performs the operation;**
 and
 a second buffer for buffering a response with respect to the request, the response being generated by the at least one thread from the second group, the response being retrieved by a thread from the first group.

After a phone interview with Examiner Moslehi, Examiner Moslehi indicated that claim 1, before it was amended, was anticipated by the disclosure of IN and OUT COM, i.e., communication, buffer in column 7, lines 1- 8 of the Beltran reference. Examiner Moslehi identified that communication buffers having an IN buffer and an OUT buffer, such as the IN and OUT COM buffers of the Beltran reference were well known in the art. He also identified that the use of IN and OUT COM buffers in a multi-threading operating system, such as Unix, was well known in the art and that the well-known use of IN and OUT COM buffers disclosed the system for inter-thread communications of claim 1.

Applicant respectfully disagrees with the Examiner. The applicant does not believe that the utilization of IN and OUT COM buffers disclose the system of inter-thread communications disclosed in claim 1, as amended. In other words, the Applicant believes that the IN and OUT COM buffers may receive and transmit requests, but that the system of claim 1, as amended, is not disclosed by the Beltran reference. The applicant requests that the Examiner specifically identify a reference

that discloses all of the limitations of claim 1, as amended, as proof that that system of inter-thread communications of claim 1 is known in the art. Specifically, the applicant requests that the Examiner identifies a reference where 1) **the at least one thread from the first group of threads is not informed as to which of the second group of threads performs the operation; and 2) a second buffer for buffering a response with respect to the request, the response being generated by the at least one thread from the second group, the response being retrieved by a thread from the first group.** According, applicant respectfully submits that claim 1, as amended, distinguishes over the Beltran reference.

Independent claims 6 and 14 recite similar limitations to independent claim 1, as amended. Accordingly, applicant respectfully submits that independent claims 6 and 14 distinguish over the Beltran reference for similar reasons as discussed above in regard to independent claim 1, as amended.

Claims 2 - 3, 7 - 9, 15 - 17, and 22 - 24 depend, directly or indirectly, on independent claims 1, 6, and 14. Accordingly, applicant respectfully submits that claims 2 - 3, 7 - 9, 15 - 17, and 22 - 24 distinguish over the Beltran reference, alone or in combination, for the same reasons as discussed above in regard to independent claims 1, 6, and 14, all as amended.

Dependent claim 23 further distinguishes over the Beltran reference. Dependent claim 23 recites:

The system of claim 1, wherein the response is retrieved by a different thread, other than the thread from the first group of threads.

The Beltran reference does not disclose that one thread from a first group of threads submits a request and that a different thread from the first group of threads

retrieves the response from the second buffer. There is no disclosure in the Beltran reference of the interaction of the IN and OUT buffer of the Beltran reference and specifically the interaction claimed in claim 23. Accordingly, applicant respectfully submits that claim 23 distinguishes over the Beltran reference.

Claim 24 further distinguishes over the cited references. Claim 24 recites:

The system of claim 1, wherein **the first buffer buffers the request in a buffer cell according to a priority of the request.**

The Beltran reference does not disclose that a request is buffered in a buffer cell according to a priority of the request. As the Examiner states on page 4 of the March 26, 2004 Office Action, the Beltran reference does not address if the buffer includes a plurality of buffer cells. Accordingly, applicant respectfully submits that claim 24 distinguishes over the Beltran reference.

The Kanai reference does not make up the deficiencies of the Beltran reference. The Examiner states that the Kanai reference discloses a system wherein a buffer includes a plurality of buffer units. The applicant understands the Examiner's use of the Kanai reference. However, the Kanai reference does not disclose **a system for inter-thread communications wherein the first buffer buffers the request in a buffer cell according to a priority of the request.** Accordingly, claim 24 distinguishes over the Beltran / Kanai reference combination.

The Hirano reference does not make up for the deficiencies of the Beltran and Kanai references. The Examiner utilizes the Hirano reference to show a method for generating a response to a request with the request after processing an available buffer cell in a second buffer, and packing the response in an available cell in the second buffer. The applicant understands the Examiner's use of the Hirano reference, but the

Hirano reference does not disclose that **the first buffer buffers the request in a buffer cell according to a priority of the request**. Accordingly, applicant respectfully submits that claim 24 further distinguishes over the Hirano / Beltran / Kanai reference combination.

Independent claim 25 distinguishes over the cited references. Claim 25 recites:

A system for inter-thread communications, comprising:
at least one thread from a first group of threads;
a first buffer for buffering a request from the at least one thread from the first group;
at least one thread from a second group of threads for performing an operation according to the request retrieved from the first buffer, **each of the second group of threads examining the request to determine if said each of said second group of threads can process the request; and**
a second buffer for buffering a response with respect to the request, the response being generated by the at least one thread from the second group, the response being retrieved by a thread from the first group.

The Beltran reference does not disclose, teach, or suggest the system of claim 25. The Beltran reference does not disclose that each of the second group of threads examines the request to determine if the request can be processed. There is no disclosure that the second group of threads in the Beltran reference, which utilize the IN and OUT COM buffers, each examine the request in the OUT COM buffer. Accordingly, applicant respectfully submits that independent claim 25 distinguishes over the Beltran reference.

Independent claims 27 and 29 recite similar limitations as independent claim 25. Accordingly, applicant respectfully submits that claims 27 and 29 distinguish over the Beltran reference for similar reasons as discussed above in regard to claim 25.

Claims 26, 28, and 30 depend directly on independent claims 25, 27, and 29. Accordingly, applicants respectfully submits that claims 26, 28, and 30 distinguish over

the Beltran reference for the same reasons discussed above in regard to claims 25, 27, and 29.

Dependent claim 26 further distinguishes over the Beltran reference. Dependent claim 26 recites:

The system of claim 25, wherein the first group of threads manages storing the request in the first buffer and the second group of threads manages storing the response in the second buffer.

The Beltran reference does not disclose the system of claim 26. The Beltran reference discloses only that COM Driver code manages the IN and OUT COM buffers. There is no discussion that a first group of threads manages storing of the request in the first buffer or that a second group of threads manages storing of the response in the second buffer. In contrast, the Beltran reference seems to disclose that the COM Driver code manages the storage and not the first and the second group of threads. Accordingly, applicant respectfully submits that claim 26 further distinguishes over the Beltran reference.

Dependent claims 28 and 30 recite similar limitations to claim 26. Accordingly, applicant respectfully submits that claims 28 and 30 further distinguish over the Beltran reference for similar reasons as discussed above in regard to claim 26.

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Applicant believes that the claims are in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call either of the undersigned attorneys at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.

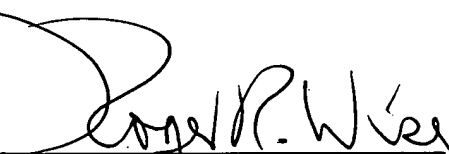
Respectfully submitted,

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